APPLICATION

FOR

UNITED STATES OF AMERICA

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SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that I,

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have invented certain improvements in

"GYMNASTIC APPARATUS FOR WALKING AND RUNNING EXERCISES"

of which the following description in connection with the accompanying drawings is a specification, like reference characters on the drawings indicating like parts in the several figures.

The present invention relates to a gymnastic apparatus for walking and running exercises.

BACKGROUND OF THE INVENTION

Apparatuses of the most disparate types have long been known for performing physical activities, such as gymnastics, suitable in particular to simulate walking and running in place according to the rhythms and requirements of the user.

Moreover, the practice of walking and running in place in an aquatic environment, i.e. for example in a swimming pool, has recently become widespread both in the sports field and in centers specialized in rehabilitation therapies. Apparatuses that have characteristics specifically defined to ensure reliable operation in the aquatic environment have been devised for this purpose in order to allow the user to enjoy particular benefits, such as intensification of the efforts caused by hydrodynamic resistance to movement and the massaging action of water on the muscles.

These apparatuses are inherently scarcely flexible and have several drawbacks that are mainly due to the constructive complications introduced in order to ensure their correct operation in an aquatic environment; moreover, in order to allow their installation they often lead to substantial modifications to the structure and bottom of the swimming pool, with expensive work.

SUMMARY OF THE INVENTION

The aim of the present invention is to obviate the above-cited drawbacks, by providing an apparatus for performing physical training activities, in particular a gymnastic apparatus that is flexible and versatile, i.e., allows to perform walking- and running-in-place exercises in any environment, including aquatic environments such as swimming pools.

Within this aim, an object of the present invention is to provide a sports apparatus that has a simple and lightweight structure and is effective and reliable in use.

Another object of the present invention is to provide a gymnastic apparatus that can be disassembled and transported easily without the intervention of specialized technicians and furthermore does not require modifications to the environment in which it is intended to be used.

Another object of the present invention is to provide a sports apparatus that is suitable to massage the sole of the feet while performing walking or running exercises.

Another object of the present invention is to provide a sports apparatus that is simple, relatively easy to provide in practice, safe in use, effective in operation, and has a relatively low cost.

This aim and these and other objects that will become better apparent hereinafter are achieved by the present gymnastic apparatus for walking and running exercises, characterized in that it comprises a platform for resting on the floor which is provided in an upper region with a pair of bars for user grip and forms a treading surface for walking and running in place, said treading surface being constituted by a plurality of parallel rollers that are supported so that they can rotate freely transversely within said platform.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of a sports apparatus for walking and running exercises according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the sports apparatus according to the invention;

Figure 2 is a partially sectional perspective view of a detail of the front portion of the platform;

Figure 3 is a partially sectional perspective view of a detail of the rear portion of the platform;

Figure 4 is a partially sectional perspective view of a detail of one of

the rollers.

In the embodiments that follow, individual characteristics, given in relation to specific examples, may actually be interchanged with other different characteristics that exist in other embodiments.

Moreover, it is noted that anything found to be already known during the patenting process is understood not to be claimed and to be deleted from the claims.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to Figure 1, the reference numeral 1 generally designates a sports apparatus for walking and running exercises according to the invention. The apparatus is designed to be placed and used in any environment, for example a sports environment or a rehabilitation therapy center, and is particularly suitable to be installed also in an aquatic environment, typically a pool or tub: in such an environment it is in fact possible to utilize hydrodynamic drag in order to intensify the efforts and produce a massaging effect on the muscles.

The sports apparatus comprises a platform 2 for resting on a floor surface (for example the bottom of the pool), which is preferably made of a metallic material that is particularly resistant to corrosion and oxidation and is constituted by a front portion 3 (Figure 2), a central portion 4 and a rear portion 5 (Figure 3); the central portion 4 of the platform forms a treading surface 6 that is suitable to perform walking- and running-in-place exercises.

The resting platform 2 is provided at an upper region with two grip bars 7 in order to keep the user balanced during the execution of the exercises and in the correct position at the treading surface 6. The bars 7 have a slender tubular shape, are substantially folded in an L-shaped configuration and are connected, at their respective front ends 8, to a sort of slender tubular arch 9 that protrudes substantially vertically from the front portion 3 of the platform 2; at the rear ends 10, said bars are fixed to the rear

portion 5 of the platform, preferably to its sides, so as to diverge slightly from the front toward the rear.

The arch 9 is connected to the front portion 3 of the platform by means of a first pair of detachable lower couplings 11; the bars 7 are connected respectively to the arch 9 and to the rear portion 5 of the platform by means of a second pair 12 and a third pair 13 of detachable couplings. Each one of the couplings 11, 12, 13 is preferably constituted by a male portion 14, which is inserted in a female portion 15 and can be locked for example by means of a pair of screws 16 (see Figure 3 in particular). Moreover, two eyes 17 are further rigidly coupled respectively to the second pair of couplings 12 in order to engage the opposite ends of a safety belt for disabled users.

The platform 2 comprises a front bar 18 and a rear bar 19, which are substantially transverse and tubular and have, at their respective ends, sorts of substantially cylindrical caps 20 made of anti-slip material (for example rubber) for stable resting on the floor. Moreover, wheels 21 are provided for carrying the apparatus and are rigidly coupled to the front bar 18.

A central upright 22 and two lateral uprights 23 are rigidly coupled by welding to the front bar 18, rise vertically, and are each provided at their top with a respective front plate 24; a central longitudinal member 25 and two lateral longitudinal members 26 are fixed respectively on the front plates 24, and each longitudinal member is substantially shaped like or extended along a path that forms a broken line and forms respective inclined portions 27 that form a preset and suitable angle with respect to the plane of the floor. The rear portions of the lateral longitudinal members 26 and of the central longitudinal member 25 are fixed, preferably by welding, above respective rear plates 28 that are rigidly coupled to the rear bar 19.

The lateral longitudinal members 26 and the central longitudinal member 25 are interconnected by means of a plurality of cross-members 29 that have a substantially square cross-section; in particular, the cross-

members are engaged by interlocking in respective recesses provided in an upper region and in a lower region and are fixed thereat by screw means 30.

A front footboard 31 and a rear footboard 32 that form anti-slip surfaces are provided at the front portion 3 and at the rear portion 5 of the platform 2.

The treading surface 6 is constituted, according to the invention, by a plurality of parallel rollers 33, which are supported so that they can rotate freely in the central portion 4 of the platform. In particular, the rollers 33 are grouped into a first set 34 and a second set 35, which are mutually adjacent and mirror-symmetrical with respect to the plane of symmetry of the platform 2; said sets are suitable to be walked on by a respective lower limb. The rollers 33 of the first and second sets 34, 35 are supported rotatably, by way of their ends, in respective pluralities of through holes 36 that have axes that lie transversely to the platform, are coaxial in threes and are provided in the lateral longitudinal members 26 and in the central longitudinal member 25.

A respective centering and reference bushing 37 is accommodated in each of the through holes 36 and is fixed to said hole preferably by seaming (Figure 4). A substantially tubular sliding bearing 38 is inserted within the bushing 37 and is suitable to provide low-friction rotary support of the respective end of the roller. The bearing 38 is preferably made of anti-friction synthetic material, for example such as Teflon.

Each one of the rollers 33 is advantageously provided with a covering 39 (Figure 2) made of a substantially soft and elastically yielding material, for example such as rubber, in order to cushion the impact of the feet of the user and make it comfortable.

The method of use of the gymnastic apparatus according to the invention is intuitive. The user climbs onto the rear footboard 32 and then reaches the treading surface 6, where he can perform walking and running exercises on the rollers 33 also achieving a beneficial massage of the soles

of the feet.

The apparatus can be disassembled rapidly, is practical and lightweight, and is extremely flexible and usable in any environment, although it is particularly suitable for aquatic environments; at the same time, its structure is solid, stable and reliable. The resting platform 2 is provided without resorting widely to welding, with consequent advantages in terms of production costs and times.

It has thus been shown that the invention achieves the intended aim and objects.

The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept.

In particular, it is possible to fit rollers 33 that are substantially twice as long and pass through the central longitudinal member 25.

All the details may be replaced with other technically equivalent ones.

In practice, the materials used, as well as the shapes and the dimensions, may be any according to requirements without thereby abandoning the scope of the protection of the appended claims.

The disclosures in Italian Patent Application No. BO2003A000171 from which this application claims priority are incorporated herein by reference.